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(54)Stabilized magnetic memory cell

A stabilized magnetic memory cell including a data storage layer 50 having an interior region and a pair of end regions 57-58 near a pair of opposing edges of the data storage layer 50 and a stabilizing material 55-56 that pins a magnetization in the end regions 57-58 to a predetermined direction. A method for stabilizing a magnetic memory cell includes the steps of applying a magnetic field that rotates a magnetization in a pair of

opposing side regions of a data storage layer 50 of the magnetic memory cell toward a predetermined direction and that reduces free poles in a pair of opposing end regions 57-58 of the magnetic memory cell, thereby reducing the likelihood of unpredictable switching behavior in the end regions 57-58.

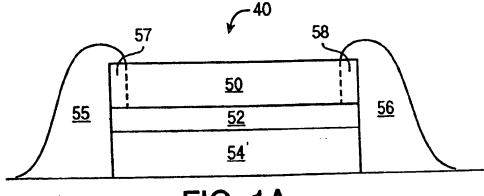


FIG. 1A

EP 0 986 065 A3



EUROPEAN SEARCH REPORT

Application Number EP 99 30 5878

Category	Citation of document with inc	lication, where appropriate,	Relevant	CLASSIFICATION OF THE		
	of relevant passag		to daim	APPLICATION (Int.CI.7)		
Υ	US 5 748 524 A (CHEN		1-7	G11C11/14		
χ .	5 May 1998 (1998-05- * the whole document	(CO)	8-20	G11C11/16		
		** ** **				
Y	EP 0 676 747 A (READ RITE CORP) 11 October 1995 (1995-10-11) * page 2, column 2, line 50 - page 3,		1-7			
	column 3, line 36 *					
E	US 5 946 228 A (ABRA	 HAM DAVID WILLIAM E	T 1-3,7-20			
_	AL) 31 August 1999 (1999-08-31)				
	* column 7, line 42	- column 9, line 47	*			
E	US 6 081 445 A (SHI	JING ET AL)	11-19			
	27 June 2000 (2000-06-27)					
	* the whole document	*				
				TECHNICAL FIELDS		
				SEARCHED (Int.CL7)		
				G11C		
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	The present search report has be	en drawn up for all claims	7			
 	Place of search	Date of completion of the search	_11	Exammer		
THE HAGUE		6 November 2000	6 November 2000 Degi			
CA	TEGORY OF CITED DOCUMENTS	T : theory or princ	aple underlying the in	vention		
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background		after the filing	E: earlier patent document, but published on, or after the filling date D: document cited in the application L: document cited for other reasons			
		L : document cite				
0.000	written disclosure		same patent family.			

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 99 30 5878

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

06-11-2000

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
US 5748524	A	05-05-1998	NON	E	
EP 0676747	Α	11-10-1995	JP	8050710 A	20-02-199
US 5946228	Α	31-08-1999	JP	11273336 A	08-10-199
US 6081445	Α	27-06-2000	WO	0007191 A	10-02-200
				*	

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

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